

REMARKS

Claims 1-13 are now pending in this application. Claims 1, 4-7, 11, and 12 have been amended to define still more clearly what Applicant regards as his invention. Claim 13 has been added to provide Applicant with a more complete scope of protection. Claims 1 and 11-13 are independent.

Claims 1-5 and 7-12 were rejected under 35 U.S.C. § 102(c) as being anticipated by U.S. Patent 5,969,764 to Sun et al. Claim 6 was rejected under 35 U.S.C. § 103(a) as being obvious from Sun et al. in view of U.S. Patent 6,415,057 to Suzuki et al.

Claim 1 is directed to an image processing apparatus including inputting means, encoding means, setting means, and control means. The inputting means inputs image data of plural objects, and the encoding means encodes, with an encoding parameter, the image data inputted by the inputting means, on an object basis. The setting means sets a priority order of code amount allocation for each of the objects. The control means controls the encoding parameter so as to control a code amount obtained by encoding the image data of the plural objects, in which the control means gives priority to the object having a predetermined priority order over other objects in controlling the encoding parameter.

Thus, the image processing apparatus of Claim 1 sets a priority order of code amount allocation for each of plural objects and controls an encoding parameter to control a code amount of image data of the objects in such a manner that priority is given to the object having a predetermined priority order over the other objects in controlling the

encoding parameter. See, e.g., Figs. 13 and 20 of the present application.¹¹ Among the notable features of Claim 1 is that the total code amount of plural objects is controlled by giving priority to the object having a predetermined priority order over the other objects in controlling the encoding parameter.

Sun et al., as understood by Applicant, relates to a method which adaptively encodes a sequence of frames including video objects to provide a compressed video signal. The encoding is via a buffer having a variable input rate and a constant output rate. The encoding uses a discrete cosine transform to produce coefficients that are quantized to generate image-representative code bits at a variable rate and texture, and motion and shape information for each video object stored in the buffer. The content of the buffer is restricted by adjusting quantization parameters with respect to a reference value and a quadratic rate distortion model to increase or decrease the number of bits stored in the buffer. Furthermore, the target number of bits for encoding each video object is estimated in accordance with a function of relative motion and size. The encoding bit rate is set to avoid buffer overflow.

Sun et al. discusses allocating a code amount $T[i]$ to each object in accordance with a size of the object and the like (see, e.g., column 9, lines 40-63) and determining a total code amount T in accordance with a buffer status so that the code amount $T[i]$ of each object is reallocated in accordance with the controlled (changed) total code amount T (see, e.g., column 6, line 28, to column 7, line 4). However, even if Sun et al. were deemed to teach setting a priority order of code amount allocation for each object,

¹¹/It is of course to be understood that the references to various portions of the present application are by way of illustration and example only, and that the claims are not limited by the details shown in the portions referred to.

as the Examiner asserts in the Office Action, Applicants have found nothing in Sun et al. that would teach or suggest giving priority to the object having a predetermined priority order over the other objects in controlling an encoding parameter to control the total code amount.

That is, Applicants have found nothing in Sun et al. that would teach or suggest setting a priority order of code amount allocation for each of plural objects and controlling an encoding parameter to control a code amount of image data of the objects, in which priority is given to the object having a predetermined priority order over the other objects in controlling the encoding parameter, as recited in Claim 1.

Accordingly, Claim 1 is believed to be clearly allowable over Sun et al.

Independent Claims 11-13 correspond to Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

A review of the other art of record, including Suzuki et al., has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from Claim 1 discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and, therefore, its entry is believed proper under 37

C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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